



## AMENDMENTS TO THE CLAIMS

(Currently Amended)

- 1        An adjustable swivel base assembly comprising:
  - 2            (a)      a planar mounting base plate defining a first major plane,
  - 3            (b)      a pair of laterally spaced apart columnar supports affixed at a first longitudinal end thereof to said base plate and extending therefrom generally perpendicularly relative to the major plane thereof,
  - 6            (c)      a planar bearing plate defining a second major plane and being stationarily supported on a second longitudinal end of said supports opposite said first longitudinal end thereof,
  - 9            (d)      a planar first bearing defining a third major plane and being stationarily supported on said bearing plate on a side thereof remote from said supports,
  - 11          (e)      a planar second bearing defining a fourth major plane and being stationarily affixed to said bearing plate and spaced from and coaxial with said first bearing, said major planes being oriented generally parallel with one another,
  - 14          (f)      a planar rotatable swivel plate supported on and sandwiched slidably between said first and second bearings for rotation in a plane generally parallel to said major planes, said rotatable swivel plate being adapted to carry a load to be swiveled by said rotation of said rotatable plate, and
  - 18          (g)      an indexable locking system for selectively locking said rotatable swivel plate in any one of a plurality of angularly spaced positions.

2. (Previously Presented)

1           The assembly set forth in claim 1 wherein said supports comprise a pair of risers  
2    each having an obround exterior contour and being symmetrically mounted to said base plate and  
3    having generally flat facing surfaces with an angled orientation relative to one another such that  
4    said facing surfaces define an included angle therebetween of about 40°.

3. (Original)

1           The assembly set forth in claim 2 wherein each said riser is made as an aluminum  
2    extrusion having a cross sectional contour to form the obround contour whereby the riser has  
3    parallel flat side walls merging with semicircular end walls.

4. (Currently Amended)

1           The assembly set forth in claim 3 wherein the an interior surface of each said  
2    semicircular end wall has individually associated therewith an integral, longitudinally extending  
3    screw boss defining an interior channel with a circular wall surface encompassing about 270° and  
4    having a diameter for slidably receiving therethrough an associated mounting screw inserted  
5    through an associated hole in said base plate and threadably secured at one end thereof in said  
6    bearing plate such that said bearing plate is fixably and securely screw-mounted on and  
7    supported by said risers which in turn are thereby securely screw-affixed to and supported by  
8    said mounting base plate.

5. (Previously Presented)

1           The assembly set forth in claim 1 wherein said swivel plate has a central through-  
2       hole defined by a bearing bore extending from a planar first side of said swivel plate adjacent  
3       said first bearing to a junction at an annular shoulder with a bearing counterbore in said swivel  
4       plate that in turn opens to a second planar side of said swivel plate remote from said first bearing,  
5       and wherein said first bearing has a raised circular central bearing boss received with a close  
6       clearance sliding fit in said bearing bore such that said first side of said swivel plate rides  
7       slidably on an adjacent surface of said first bearing that encircles said central bearing boss of said  
8       first bearing, and wherein said second bearing also has a bearing boss portion that fits slidably  
9       within said plate bearing bore and has a radially extending marginal flange portion that rides  
10      slidably on said annular shoulder of said swivel plate through-hole defining said bearing bore  
11      and wherein said swivel plate is clamped by and between said first and second bearings, both of  
12      which are held affixed by studs extending to and fastened to said bearing plate.

6. (Previously Presented)

1           The assembly set forth in claim 5 wherein said first and second bearings are made  
2       of plastic material, and wherein said first and second bearings are backed up respectively by a  
3       second metal bearing cover plate overlying said second bearing and by said bearing plate with  
4       said bearing plate being made of metal, and wherein said studs are constructed and arranged such  
5       to extend through the assembly of said first and second bearings as well as said second metal  
6       bearing cover plate and said bearing plate and tensioned to a predetermined torque to minimize

7 play or loose fit of said swivel plate and yet still allow the rotatable swivel plate to swivel freely  
8 relative to the remaining components of said base assembly.

7. (Currently Amended)

1           The assembly set forth in claim 1 wherein said swivel plate is provided with a  
2 predetermined universal pattern of threaded through-holes, said through holes being  
3 predetermined by design to match up with the mounting bolt pattern patterns of downrigger  
4 mounting platforms of various configurations that are to be removably attached to said rotatable  
5 swivel plate by mounting fasteners.

8. (Currently Amended)

1           The assembly set forth in claim 1 wherein said indexable locking system  
2 comprises a negative gear-like profile formed in a side face of said swivel plate disposed  
3 adjacent said first bearing, said gear-like profile including an annular cavity defined by a  
4 recessed wall inset from and parallel to said swivel plate side face and bounded on an inner  
5 diameter by a cylindrical wall surface concentric with said bearings, said cavity recessed wall  
6 being bounded on an outer periphery by a plurality of equally angularly spaced tooth peak  
7 surfaces that define an interrupted cylindrical surface of larger diameter than, and concentric  
8 with, said inner cylindrical wall surface, said gear-like profile further including a plurality of  
9 equally angularly spaced teeth root cavities extending entirely radially outwardly from said  
10 interrupted cylindrical surface, said cavities being individually arranged between each adjacent  
11 pair of said tooth peak surfaces, and further including a locking pin supported by said bearing

12 plate so as to be operable in said annular cavity to be spring biased into selective engagement  
13 with a selected one of said teeth root cavities to thereby lock said rotatable swivel plate at a fixed  
14 angular position relative to the remaining components of said base assembly, and upon  
15 withdrawal of said locking pin from said selected ~~tooth~~ teeth cavity thereby enabling free  
16 rotation of said swivel plate relative to the remaining components of said base assembly.

9. (Currently Amended)

1 The assembly set forth in claim 8 including a locking lever pivotally mounted to  
2 said bearing plate and carrying said locking pin, said bearing plate and said first bearing each  
3 having arcuate slots formed therein through which said locking pin extends into said annular  
4 cavity for swinging in an arcuate travel path between engaged and disengaged positions relative  
5 to said teeth root cavities of said gear-like profile in said swivel plate, said lever being pivotally  
6 mounted to operate as a lever of the first class with one end carrying said locking pin and the  
7 opposite end carrying an operating handle, and further including a coil spring coupled between  
8 said lever and one of said ~~risers~~ supports such that said lever is normally spring biased to pivot in  
9 a direction to drive said locking pin toward ~~the~~ a root or bottom of said selected ~~tooth~~ teeth  
10 cavity.

10. (Original)

1 The assembly set forth in claim 9 wherein said lever handle is oriented to extend  
2 from said lever toward said mounting base plate.

11. (Currently Amended)

1           The assembly set forth in claim 9 wherein said lever handle is constructed and  
2       arranged such that it is swung in a direction outwardly away from said assembly to retract said  
3       locking pin out of registry with the selected ~~tooth~~ teeth cavity in said swivel plate and into said  
4       annular cavity whereupon said swivel plate is free to swivel about the axis of said first and  
5       second bearings, and such that once unlocking force is removed from said lever by releasing said  
6       handle said spring is operable to bias said lever to force said locking pin against whichever tooth  
7       peak surface it may be registered, whereupon swivel motion of said swivel plate that registers  
8       said locking pin with an adjacent ~~tooth~~ teeth cavity allows spring bias on said lever to snap force  
9       said pin into such cavity.

12. (Currently Amended)

1           The assembly set forth in claim 11 wherein said swivel plate has twelve of said  
2       ~~tooth~~ teeth cavities, thereby providing locking positions at 30° angular increments for a full 360°  
3       swivel traverse of said swivel plate.

13. (Currently Amended)

1           The assembly set forth in claim 11 wherein each of said tooth peak surfaces  
2       terminates at a circumferentially spaced pair of tooth corners located at the circumferentially  
3       opposite ends of each said tooth peak surface, said tooth corners being relatively sharp and have  
4       a small radius dimension to thereby produce a snap action drop in of said locking pin as said  
5       spring forces said lever in the lock-up direction.

14. (Currently Amended)

1       The assembly set forth in claim 11 wherein said teeth root cavities are each  
2 generated on a respective longitudinal centerline that is curved with the same radius as the  
3 arcuate path of travel of said locking pin whereby upon said lever being released, such curvature  
4 of each ~~tooth~~ teeth cavity allows a quick drop in action of said locking pin upon being initially  
5 registered with a ~~the~~ selected ~~tooth~~ teeth cavity and then forced into such tooth cavity under the  
6 biasing force of said spring.

15. (Currently Amended)

1       The assembly set forth in claim 8 wherein each said ~~tooth~~ teeth cavity has a pair  
2 of juxtaposed sidewalls that are tapered so as to converge slightly radially outwardly of said  
3 annular cavity and toward an associated root surface of each said ~~tooth~~ teeth cavity such that said  
4 pair of ~~tooth~~ teeth cavity sidewalls are spaced apart by a transverse dimension less than ~~the a~~  
5 diameter of said locking pin at a point in ~~the a~~ travel path of said pin into any selected one of said  
6 ~~tooth~~ teeth cavities such that the locking pin cannot touch ~~the a~~ bottom of said root surface of  
7 said selected ~~tooth~~ teeth cavity such that said locking pin seats, in locked position, against said  
8 sidewalls of said selected ~~tooth~~ teeth cavity without bottoming in the same.

16. (Currently Amended)

1       An adjustable swivel base assembly and track combination for swivel mounting  
2 on a fishing boat of downrigger and/or planar board masts used for fishing, said assembly  
3 comprising:

4                         (a)      a planar mounting base plate defining a first major plane,

5                         (b)      a pair of laterally spaced apart columnar supports affixed at a longitudinal  
6 bottom end thereof to said base plate and extending therefrom generally perpendicularly  
7 upwardly therefrom relative to the major plane thereof,

8                         (c)      a planar bearing plate defining a second major plane and being stationarily  
9 supported on a longitudinal upper end of each said support opposite said bottom end thereof,

10                       (d)      a planar bottom bearing defining a third major plane and being stationarily  
11 supported on said bearing plate on an upper side thereof remote from said supports,

12                       (e)      a planar top bearing defining a fourth major plane and being stationarily  
13 affixed to said bearing plate and spaced upwardly therefrom and coaxial with said bottom  
14 bearing said major planes being oriented generally parallel with one another,

15                       (f)      a planar rotatable swivel top plate supported on and sandwiched slidably  
16 between said top and bottom bearings for rotation in a plane generally parallel to the major  
17 planes ~~of said base plate and said bearings~~, said rotatable swivel plate being adapted to carry a  
18 downrigger and/or planar board mast load to be swiveled by said rotation of said rotatable swivel  
19 top plate,

20                       (g)      an indexable locking system for selectively locking said rotatable swivel  
21 top plate in any one of a plurality of angularly spaced positions, and

22                       (h)      a mounting track adapted to be mounted on a gunnel or transom of a  
23 fishing boat, said track having side edge flanges with mutually facing in-turned lips, said  
24 assembly base plate being slidably mounted in said track with said track flange lips overlapping  
25 a pair of opposite side edges of said base plate, said base plate carrying locking means for  
26 releasably locking said base plate at a desired location along said track.

17. (Previously Presented)

1       The combination set forth in claim 16 wherein said supports comprise a pair of  
2       risers each having an obround exterior contour and being symmetrically mounted to said base  
3       plate and having generally flat facing side surfaces with an angled orientation relative to one  
4       another such that said facing surfaces define an included angle therebetween of about 40°.

18. (Original)

1       The combination set forth in claim 17 wherein each said riser is made as an  
2       aluminum extrusion having a cross sectional contour to form the obround contour whereby the  
3       riser has parallel flat side walls merging with semicircular end walls.

19. (Currently Amended)

1       The combination set forth in claim 18 wherein the an interior surface of each said  
2       riser semicircular end wall has individually associated therewith an integral, longitudinally  
3       extending screw boss defining an interior channel with a circular wall surface encompassing  
4       about 270° and having a diameter for slidably receiving therein an associated mounting screw  
5       inserted through an associated hole in said base plate and threadably secured at one end thereof  
6       in said bearing plate such that said bearing plate is fixably and securely screw-mounted on and  
7       supported by said risers which in turn are thereby securely screw-affixed to and supported by  
8       said mounting base plate.

20. (Original)

1           The combination set forth in claim 16 wherein said swivel plate has a central  
2 through-hole defined by a bearing bore extending from a planar bottom side of said swivel plate  
3 adjacent said first bottom bearing to a junction at an annular shoulder with a bearing counterbore  
4 in said swivel plate that in turn opens to an upper planar side of said swivel plate remote from  
5 said bottom bearing, and wherein said bottom bearing has a raised circular central bearing boss  
6 received with a close clearance sliding fit in said bearing bore such that said bottom side of said  
7 swivel plate rides slidably on an adjacent upper surface of said bottom bearing that encircles said  
8 bottom bearing boss, and wherein said top bearing also has a bearing boss portion that fits  
9 slidably within said plate bearing bore and has a radially extending marginal flange portion that  
10 rides slidably on said annular shoulder of said swivel plate through-hole defining said bearing  
11 bore and wherein said swivel plate is clamped by and between said top and bottom bearings,  
12 both of which are held affixed by studs extending to and fastened to said stationary bearing plate.

21. (Previously Presented)

1           The combination set forth in claim 20 wherein said top and bottom bearings are  
2 made of plastic material, and wherein said top and bottom bearings are backed up respectively by  
3 a top metal bearing cover plate overlying said top bearing and by said bottom bearing plate with  
4 said bottom bearing plate being made of metal to serve as the bottom bearing back-up metal  
5 cover plate, and wherein said studs are constructed and arranged to extend through the assembly  
6 of said top and bottom bearings as well as said top bearing cover plate and said bearing plate and  
7 tensioned to a predetermined torque to minimize play or loose fit of said swivel plate and yet still

8 allow the rotatable swivel plate to swivel freely relative to the remaining components of said  
9 base assembly.

22. (Currently Amended)

1 The combination set forth in claim 21 wherein said swivel plate is provided with a  
2 predetermined universal pattern of threaded through-holes said through holes being  
3 predetermined by design to match up with ~~the~~ mounting bolt pattern patterns of downrigger or  
4 planar board masts mounting platforms of various configurations that are to be removably  
5 attached to said rotatable swivel plate by mounting fasteners.

23. (Currently Amended)

1 The combination set forth in claim 20 wherein said indexable locking system  
2 comprises a negative gear-like profile formed in a side face of said swivel plate disposed  
3 adjacent said bottom bearing, said gear-like profile including an annular cavity defined by a  
4 recessed wall inset from and parallel to said swivel plate side face and bounded on an inner  
5 diameter by a cylindrical wall surface concentric with said bearings, said cavity recessed wall  
6 being bounded on an outer periphery by equally angularly spaced tooth peak surfaces that define  
7 an interrupted cylindrical surface of larger diameter than, and concentric with, said inner  
8 cylindrical wall surface, said gear-like profile further including a plurality of equally angularly  
9 spaced teeth root cavities extending entirely radially outwardly from said interrupted cylindrical  
10 surface, said cavities being individually arranged between each adjacent pair of said tooth peak  
11 surfaces, and further including a locking pin operably supported by said bearing plate so as to be

12 operable in said annular cavity to be spring biased into selective engagement with a selected one  
13 of said teeth root cavities to thereby lock said rotatable swivel plate at a fixed angular position  
14 relative to the remaining components of said base assembly, and upon withdrawal of said locking  
15 pin from said selected ~~teeth~~ teeth cavity thereby enabling free rotation of said swivel plate  
16 relative to the remaining components of said base assembly.

24. (Currently Amended)

1           The combination set forth in said claim 23 including a locking lever pivotally  
2 mounted to said bearing plate and carrying said locking pin, said bearing plate and said bottom  
3 bearing each having arcuate slots formed therein through which said locking pin extends into  
4 said annular cavity for swinging in an arcuate travel path between engaged and disengaged  
5 positions relative to said teeth root cavities of said gear-like profile in said swivel plate, said  
6 lever being pivotally mounted to operate as a lever of the first class with one end carrying said  
7 locking pin and the opposite end carrying an operating handle, and further including a coil spring  
8 coupled between said lever and a stationary component of said base assembly such that said  
9 lever is normally spring biased to pivot in a direction to drive said locking pin toward the a root  
10 or bottom of said selected ~~teeth~~ teeth cavity.

25. (Original)

1           The combination set forth in claim 24 wherein said lever handle is oriented to  
2 extend downwardly from said lever toward said mounting base plate.

26. (Currently Amended)

1           The combination set forth in claim 25 wherein said lever handle is constructed  
2 and arranged such that it is swung in a direction outwardly away from said assembly to retract  
3 said locking pin out of registry with the selected ~~tooth~~ teeth cavity in said swivel plate and into  
4 said annular cavity whereupon said swivel plate is free to swivel about the axis of said top and  
5 bottom bearings, and such that once unlocking force is removed from said lever by releasing said  
6 handle said spring is operable to bias said lever to force said locking pin against whichever tooth  
7 peak surface it may be registered, whereupon swivel motion of said swivel plate that registers  
8 said locking pin with an adjacent ~~tooth~~ teeth cavity allows spring bias on said lever to snap force  
9 said pin into such cavity.

27. (Currently Amended)

1           The combination set forth in claim 26 wherein said swivel plate has twelve of said  
2 ~~tooth~~ teeth cavities, thereby providing locking positions at 30° angular increments for a full 360°  
3 swivel traverse of said swivel plate.

28. (Currently Amended)

1           The combination set forth in claim 26 wherein each of said tooth peak surfaces  
2 terminates at a circumferentially spaced pair of tooth corners located at the circumferentially  
3 opposite ends of each said tooth ~~are~~ peak surface, said tooth corners being relatively sharp and  
4 have a small radius dimension to thereby produce a snap action drop in of said locking pin as  
5 said spring forces said lever in the lock-up direction.

29. (Currently Amended)

1           The combination set forth in claim 26 wherein said teeth root cavities are  
2 individually generated along a respective longitudinal centerline that is curved with the same  
3 radius as the arcuate path of travel of said locking pin whereby upon said lever being released,  
4 such curvature of each ~~tooth~~ teeth cavity allows a quick drop in action of said locking pin upon  
5 being initially registered with a the selected tooth cavity and then forced into such ~~tooth~~ teeth  
6 cavity under the biasing force of said spring.

30. (Currently Amended)

1           The combination set forth in claim 29 wherein each said ~~tooth~~ teeth cavity has a  
2 pair of juxtaposed sidewalls that are tapered so as to converge slightly radially outwardly of said  
3 annular cavity and toward an associated root surface of each said ~~tooth~~ teeth cavity such that said  
4 ~~tooth~~ teeth cavity sidewalls of each ~~tooth~~ teeth cavity are spaced apart by a transverse ~~tooth~~ teeth  
5 cavity dimension less than ~~the~~ a diameter of said locking pin at a point in the travel path of said  
6 pin in any selected one of said teeth cavities such that the locking pin cannot touch ~~the~~ a bottom  
7 of said root surface of each said selected ~~tooth~~ teeth cavity and such that said locking pin seats,  
8 in locked position, against said sidewalls of each said selected ~~tooth~~ teeth cavity without  
9 bottoming in the same.

31. (Currently Amended)

1           A method for swivel mounting on a fishing boat of downrigger and/or planar  
2 board masts used for fishing, said method comprising the steps of:

- 3                         (a)     providing a planar mounting base plate defining a first major plane,  
4                         (b)     providing a pair of laterally spaced apart columnar supports affixed at a  
5     longitudinal bottom end thereof to said base plate and extending therefrom generally  
6     perpendicularly upwardly therefrom relative to the major plane thereof,  
7                         (c)     providing a planar bearing plate defining a second major plane and being  
8     stationarily supported on a longitudinal upper end of each said support opposite said bottom end  
9     thereof,  
10                       (d)     providing a planar bottom bearing defining a third major plane and being  
11    stationarily supported on said bearing plate on an upper side thereof remote from said supports,  
12                       (e)     providing a planar top bearing defining a fourth major plane and being  
13    stationarily affixed to said bearing plate and spaced upwardly therefrom and coaxial with said  
14    bottom bearing said major planes being oriented generally parallel with one another,  
15                       (f)     providing a planar rotatable swivel top plate supported on and sandwiched  
16    slidably between said top and bottom bearings for rotation in a plane generally parallel to the  
17    major planes ~~of said base plate and said bearings~~, said rotatable swivel plate being adapted to  
18    carry a downrigger and/or planar board mast load to be swiveled by said rotation of said rotatable  
19    swivel top plate,  
20                       (g)     providing an indexable locking system for selectively locking said  
21    rotatable swivel top plate in any one of a plurality of angularly spaced positions, and  
22                       (h)     providing a mounting track mounted on a gunnel or transom of the fishing  
23    boat, said track having side edge flanges with mutually facing in-turned lips, and slidably  
24    mounting said assembly base plate in said track with said track flange lips overlapping a pair of

25 opposite side edges of said base plate, said base plate carrying locking means for releasably  
26 locking said base plate at a desired location along said track.

32. (Currently Amended)

1           The method set forth in claim 31 wherein said indexable locking system  
2 comprises a negative gear-like profile formed in a side face of said swivel plate disposed  
3 adjacent said bottom bearing, said gear-like profile including an annular cavity defined by a  
4 recessed wall inset from and parallel to said swivel plate side face and bounded on an inner  
5 diameter by a cylindrical wall surface concentric with said bearings, said cavity recessed wall  
6 being bounded on an outer periphery by equally angularly spaced tooth peak surfaces that define  
7 an interrupted cylindrical surface of larger diameter than, and concentric with, said inner  
8 cylindrical wall surface, said gear-like profile further including a plurality of equally angularly  
9 spaced teeth root cavities extending entirely radially outwardly from said interrupted cylindrical  
10 surface, said cavities being individually arranged between each adjacent pair of said tooth peak  
11 surfaces, and further including a locking pin operably supported by said bearing plate so as to be  
12 operable in said annular cavity to be spring biased into selective engagement with a selected one  
13 of said teeth root cavities to thereby lock said rotatable swivel plate at a fixed angular position  
14 relative to the remaining components of said base assembly, and upon withdrawal of said locking  
15 pin from said selected tooth teeth cavity thereby enabling free rotation of said swivel plate  
16 relative to the remaining components of said base assembly.

33. (Currently Amended)

1           The method set forth in claim 32 including a locking lever pivotally mounted to  
2    said bearing plate and carrying said locking pin, said bearing plate and said bottom bearing each  
3    having arcuate slots formed therein through which said locking pin extends into said annular  
4    cavity for swinging in an arcuate travel path between engaged and disengaged positions relative  
5    to said teeth root cavities of said gear-like profile in said swivel plate, said lever being pivotally  
6    mounted to operate as a lever of the first class with one end carrying said locking pin and the  
7    opposite end carrying an operating handle, and further including a coil spring coupled between  
8    said lever and a stationary component of said base assembly such that said lever is normally  
9    spring biased to pivot in a direction to drive said locking pin toward ~~the a~~ root or bottom of said  
10   selected ~~teeth~~ teeth cavity.

34. (Original)

1           The method set forth in claim 33 wherein said lever handle is oriented to extend  
2    downwardly from said lever toward said mounting base plate.

35. (Currently Amended)

1    The method set forth in claim 34 wherein said lever handle is constructed and arranged such that  
2    it is swung in a direction outwardly away from said assembly to retract said locking pin out of  
3    registry with the selected ~~teeth~~ teeth cavity in said swivel plate and into said annular cavity  
4    whereupon said swivel plate is free to swivel about the axis of said top and bottom bearings, and  
5    such that once unlocking force is removed from said lever by releasing said handle said spring is  
6    operable to bias said lever to force said locking pin against whichever tooth peak surface it may

7       be registered, whereupon swivel motion of said swivel plate that registers said locking pin with  
8       an adjacent ~~tooth~~ teeth cavity allows spring bias on said lever to snap force said pin into such  
9       cavity.

36. (Currently Amended)

1           The method set forth in claim 35 wherein each of said tooth peak surfaces  
2       terminates at a circumferentially spaced pair of tooth corners located at ~~the~~ circumferentially  
3       opposite ends of each tooth peak surface, said tooth corners being relatively sharp and have a  
4       small radius dimension to thereby produce a snap action drop in of said locking pin as said  
5       spring forces said lever in the lock-up direction.

37. (Currently Amended)

1           The method set forth in claim 35 wherein said teeth root cavities are individually  
2       generated along a longitudinal centerline that is curved with the same radius as the arcuate path  
3       of travel of said locking pin whereby upon said lever being released, such curvature of each ~~tooth~~  
4       teeth cavity allows a quick drop in action of said locking pin upon being initially registered with  
5       a selected ~~tooth~~ teeth cavity and then forced into such ~~tooth~~ teeth cavity under the biasing force  
6       of said spring.

38. (Currently Amended)

1           The method set forth in claim 37 wherein ~~of~~ each said ~~tooth~~ teeth cavity has a pair  
2       of juxtaposed sidewalls that are tapered so as to converge slightly radially outwardly of said  
3       annular cavity and toward an associated root surface of each said ~~tooth~~ teeth cavity such that said

4    ~~teeth~~ teeth cavity sidewalls of each ~~teeth~~ teeth cavity are spaced apart by a the transverse tooth  
5    cavity dimension less than the diameter of said locking pin at a point in the travel path of said pin  
6    in any selected one of said teeth cavities such that the locking pin cannot touch ~~the~~ a bottom of  
7    said root surface of said selected ~~teeth~~ teeth cavity and such that said locking pin seats, in locked  
8    position, against said sidewalls of each said selected ~~teeth~~ teeth cavity without bottoming in the  
9    same.